DOCUMENT RESUME

ED 412 859 HE 030 650

AUTHOR	Cuccaro-Alamin, Stephanie
TITLE	Postsecondary Persistence and Attainment. Findings from "The Condition of Education, 1997," No. 13.
INSTITUTION	MPR Associates, Berkeley, CA.
SPONS AGENCY	National Center for Education Statistics (ED), Washington, DC.
REPORT NO	NCES-97-984
ISBN	ISBN-0-16-049222-X
PUB DATE	1997-09-00
NOTE	39p.; For "The Condition of Education, 1997," see ED 404 766.
AVAILABLE FROM	U.S. Government Printing Office, Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328.
PUB TYPE	Numerical/Quantitative Data (110) -- Reports - Evaluative (142)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Academic Achievement; Academic Aspiration; *Academic Persistence; Access to Education; Bachelors Degrees; College Outcomes Assessment; Colleges; Community Colleges; *Degrees (Academic); Enrollment; Full Time Students; Higher Education; Outcomes of Education; Part Time Students; Postsecondary Education; *School Holding Power; Student Educational Objectives; *Student Employment; Student Financial Aid; Two Year Colleges
IDENTIFIERS	*Time to Degree

ABSTRACT

This booklet summarizes data on the persistence and attainment outcomes of students in postsecondary education and the enrollment factors related to these outcomes. The primary data describe students, as of 1994, who began their postsecondary education in the 1989-90 academic year. Additional data describe postsecondary education experiences of 1980 high school sophomores 10 years after their expected graduation and the experiences of 16- to 24-year-olds from the 1970s to the 1990s. Generally, the evidence suggests: that students who attend school part time and work full time are less likely to complete their degree in a timely fashion than full-time students; that students enrolling in a 4-year institution immediately following high school are more likely to attain a bachelor's degree within five years than students taking other routes; and that bachelor's degree seekers who did or did not receive financial aid persisted and attained at similar rates. The report's major findings are reported in sections on: postsecondary access, postsecondary outcomes, degree objective, type of institution, timing of enrollment, enrollment intensity and continuity, financial aid, and working while enrolled. (Contains 30 references.) (DB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 412 859

ATIONAL CENTER FOR EDUCATION STATISTICS

dings from
E CONDITION OF EDUCATION 1997

NO. 13

POSTSECONDARY PERSISTENCE AND ATTAINMENT

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

BEST COPY AVAILABLE

IAE030650

U.S. Department of Education
Office of Educational Research and Improvement
NCES 97-984

U.S. DEPARTMENT OF EDUCATION
Richard W. Riley
Secretary

OFFICE OF EDUCATIONAL RESEARCH AND IMPROVEMENT
Ramon C. Cortines
Acting Assistant Secretary

NATIONAL CENTER FOR EDUCATION STATISTICS
Pascal D. Forgione, Jr.
Commissioner

The National Center for Education Statistics (NCES) is the primary federal entity for collecting, analyzing, and reporting data related to education in the United States and other nations. It fulfills a congressional mandate to collect, collate, analyze, and report full and complete statistics on the condition of education in the United States; conduct and publish reports and specialized analyses of the meaning and significance of such statistics; assist state and local education agencies in improving their statistical systems; and review and report on education activities in foreign countries.

NCES activities are designed to address high priority education data needs; provide consistent, reliable, complete, and accurate indicators of education status and trends; and report timely, useful, and high quality data to the U.S. Department of Education, the Congress, the states, other education policymakers, practitioners, data users, and the general public.

We strive to make our products available in a variety of formats and in language that is appropriate to a variety of audiences. You, as our customer, are the best judge of our success in communicating information effectively. If you have any comments or suggestions about this or any other NCES product or report, we would like to hear from you. Please direct your comments to:

National Center for Education Statistics
Office of Educational Research and Improvement
U.S. Department of Education
555 New Jersey Avenue NW
Washington, DC 20208-5574

September 1997

The text in this booklet was written by Stephanie Cuccaro-Alamin of MPR Associates, Inc. and appears in ***The Condition of Education, 1997.*** *Andrea Livingston, Karyn Madden, and Barbara Kridl edited the text, and Leslie Retallick, Mary Sukkestad, and Don Eike designed the graphics and layout.*

BEST COPY AVAILABLE

POSTSECONDARY PERSISTENCE AND ATTAINMENT

Postsecondary degree attainment is associated with better access to employment and higher earnings, especially for bachelor's degree seekers.[1] In 1995, on average, male bachelor's degree recipients aged 25–34 earned 52 percent more, and female bachelor's degree recipients 91 percent more, than their counterparts with a high school diploma.[2] As students' awareness of the economic and social benefits of degree attainment has increased, so have their postsecondary enrollments. The percentage of high school graduates who enrolled in 2- or 4-year colleges and universities in the October following graduation increased from 49 percent to 62 percent between 1972 and 1995.[3] During this same period, the percentage of 25- to 29-year-old high school graduates who had completed 4 or more years of college rose from 24 to 28 percent.[4]

To help ensure successful outcomes for the increasing number of students seeking postsecondary credentials, it is crucial to understand the factors associated with degree completion. Today, students can choose from a range of institution types and enrollment options to find the best fit between their degree objectives, abilities, and social and economic circumstances. Many students are attending part time, working while enrolled, attending sporadically, and attending more than one institution before graduating.[5] While these strategies may help students strike a balance between their economic and social considerations and their degree objectives, they may also negatively affect students' persistence and attainment.

The following discussion addresses how students' enrollment choices are related to their postsecondary persistence and attainment. Specifically, it takes into account such factors as degree objective, type of institution attended, timing of enrollment, enrollment intensity and continuity, transfer, financial aid

receipt, and student employment. Examining persistence and attainment outcomes and the enrollment factors related to them can provide the critical information necessary to help teachers, counselors, parents, and students make informed enrollment decisions to help maximize their success.

Most of the data describe the persistence and attainment through 1994 of students (regardless of age) who began their postsecondary education in the 1989–90 academic year. Additional data describe the postsecondary experiences of 1980 high school sophomores 10 years after their expected graduation. Some data on the college experiences of 16- to 24-year-olds from the 1970s to the 1990s are also included.

Postsecondary Access

- **Increasing proportions of high school graduates are enrolling in 2- or 4-year colleges and universities.**

The percentage of high school graduates who enrolled in 2- or 4-year colleges and universities in the October following high school graduation increased from 49 percent in 1972 to 62 percent in 1995. The difference in the immediate enrollment rates of male and female high school graduates disappeared during this period.

Despite overall rising enrollment rates, participation in higher education is still lower for many minority and low income students. The percentage of high school graduates aged 16–24 who enrolled in college immediately after high school grew for whites and blacks between 1972 and 1995, and fluctuated but, overall, remained relatively stable for Hispanics. In addition, in 1972, high school graduates from low income families were less likely than those from middle or high income families to go directly to college; these income differences still existed in 1995.

Percentage of high school graduates aged 16–24 enrolled in college the October following graduation, by selected characteristics: 1972 and 1995

Selected characteristics	1972	1995
Total	**49.2**	**61.9**
Sex		
Male	52.7	62.6
Female	46.0	61.3
Family income		
Low income	26.1	34.2
Middle income	45.2	56.1
High income	63.8	83.4
Race/ethnicity		
White	49.7	64.3
Black	44.6	51.2
Hispanic	45.0	53.7

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Immediate enrollment in postsecondary education following high school graduation is not a complete measure of enrollment trends, however, as many students may delay their entry into postsecondary education to work and save money for school. Examining the postsecondary enrollment rates of 1980 high school sophomores within 10 years of their expected high school graduation (1992) produces a more accurate picture of enrollment. For example, among the 1980 high school sophomore cohort, by 1992 female students were more likely to have enrolled in postsecondary education than were males.

Nevertheless, the disparities found in the immediate enrollment rates of low income and some minority high school graduates aged 16–24 are still evident when we examine the postsecondary enrollment rates of 1980 high school sophomores after 10 years. For example, white students from this cohort were more likely

BEST COPY AVAILABLE

than black or Hispanic students to have enrolled in postsecondary education within 10 years (69 versus 61 and 53 percent, respectively). In addition, black students were more likely than their Hispanic counterparts to enroll by 1992 (61 percent versus 53 percent), and students with high socioeconomic status (SES) were nearly twice as likely as their low SES counterparts to do so (88 versus 48 percent).

Percentage of 1980 high school sophomores who were enrolled in postsecondary education by 1992, by 1982 selected characteristics

Selected characteristics	Enrolled by 1992
Total	**66.4**
Sex	
Male	61.9
Female	70.7
Socioeconomic status	
Lowest quartile	48.0
Middle quartiles	69.0
Highest quartile	88.3
Race/ethnicity	
White	68.8
Black	61.3
Hispanic	53.1

SOURCE: NCES, High School and Beyond (HS&B) study 1980 Sophomore Cohort, Base Year, First, and Fourth Follow-up surveys.

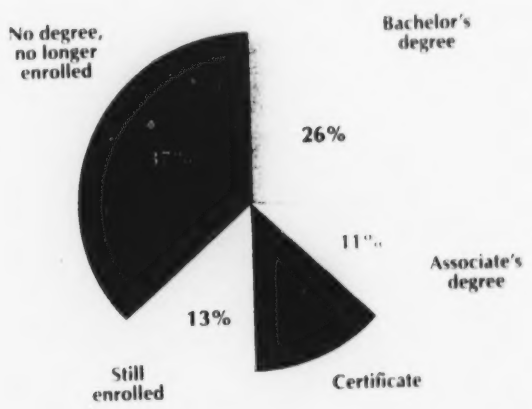
Even among students in the highest achievement test quartiles, enrollment rates were considerably lower for low SES students than for high SES students. For example, 1992 seniors in the highest achievement test quartile and highest SES were much more likely to enroll within 2 years of scheduled graduation than those in the highest achievement test quartile and lowest SES (97 compared to 78 percent, respectively).[9] Although enrolling in

postsecondary education is the first step toward degree completion, ultimate attainment of a postsecondary credential depends upon students' ability to persist in their enrollment.

POSTSECONDARY OUTCOMES

Approximately half of those students of all ages who began their postsecondary education in 1989–90 attained some postsecondary credential within 5 years of their initial enrollment: 26 percent obtained a bachelor's degree, 11 percent an associate's degree, and 13 percent a certificate. Another 13 percent of students were also still working toward a degree in 1994, and the

Percentage of 1989–90 beginning postsecondary students according to persistence and attainment outcomes as of spring 1994



SOURCE: NCES, 1990 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:90/94).

remaining 37 percent were no longer enrolled and left without a degree or certificate by that year.[7]

- **Disparities found in postsecondary enrollment rates related to low income and minority status are also evident in attainment outcomes.**

Generally, regardless of the type of degree pursued, 1980 high school sophomores with low SES backgrounds and those from some minority groups were less likely than others to obtain a postsecondary credential. For instance, Asian/Pacific Islander and white high school sophomores were more likely than their black, Hispanic, or American Indian/Alaskan Native counterparts to have earned a bachelor's degree by 1992. In addition, high school sophomores with high SES backgrounds were much more likely than their low or middle SES counterparts to have earned at least a bachelor's degree. About 75 percent of low SES high school sophomores had obtained no postsecondary credential by 1992.[8]

Students who choose to enroll in postsecondary education face a range of enrollment choices. Such choices include their degree objective, the type of institution to attend, the timing of enrollment, enrollment intensity and continuity, and financing their enrollment. These decisions, in turn, can affect students' persistence and attainment outcomes.

Percentage distribution of 1980 high school sophomores according to highest degree earned through 1992, by selected characteristics

Selected characteristics	Less than high school	High school	Certificate	Associate's	Bachelor's or higher
Total	**5.8**	**51.5**	**11.0**	**7.9**	**23.8**
Sex					
Male	6.5	53.5	9.7	6.7	23.6
Female	5.0	49.5	12.4	9.1	23.9
Socioeconomic status					
Lowest quartile	9.0	64.6	12.3	6.9	7.2
Middle two quartiles	3.9	53.8	11.5	9.1	21.6
Highest quartile	1.4	32.7	7.0	7.6	51.3
Race/ethnicity					
White	4.9	49.1	10.1	8.4	27.5
Black	6.9	59.6	16.3	5.2	12.2
Hispanic	11.9	59.6	11.2	7.3	9.9
Asian/Pacific Islander	0.6	40.9	6.9	6.2	45.6
American Indian/ Alaskan Native	17.8	58.2	11.8	5.0	7.2

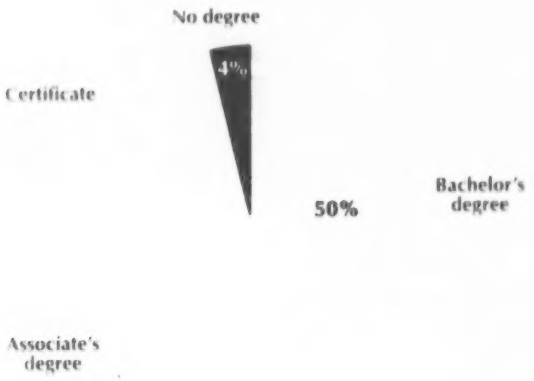
SOURCE: NCES, High School and Beyond (HS&B) study 1980 Sophomore Cohort, Base Year, First, and Fourth Follow-up surveys.

DEGREE OBJECTIVE

Of students beginning their postsecondary education for the first time in the 1989–90 academic year, half were working toward a bachelor's degree, 30 percent toward an associate's degree, and 16 percent toward a certificate. Approximately 4 percent of first-time beginners were not working toward any degree.[9] An examination of student outcomes 5 years later shows differential results depending on degree objective.

BEST COPY AVAILABLE

Percentage distribution of 1989–90 beginning postsecondary students according to degree objective in 1989–90



SOURCE: NCES, 1990 Beginning Postsecondary Students Longitudinal Study Second Follow-up (BPS:90/94).

- **Students seeking bachelor's degrees are more likely than students seeking other degrees to attain a degree or be still enrolled 5 years after their initial enrollment.**

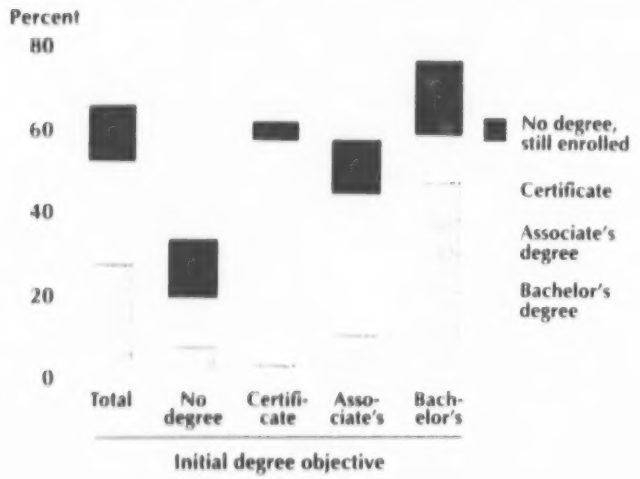
Irrespective of the institution where they first enrolled, first-time beginning students seeking bachelor's degrees in 1989–90 were more likely than those seeking associate's degrees to attain their degree objective within 5 years of initial enrollment (46 versus 23 percent); however, they were no more likely than students seeking certificates to do so (48 percent). Given the relative durations of the typical programs, data on differences in degree completion after 5 years may be more meaningful for students seeking associate's degrees and certificates than for bachelor's degree seekers.

In measuring persistence and attainment rates for bachelor's degree seekers, it is appropriate to include those still enrolled in

BEST COPY AVAILABLE

postsecondary education who have not yet reached their goal, as well as those who have attained a degree other than the one they initially sought. By this measure, bachelor's degree seekers were more likely to persist overall than their counterparts seeking any other degree. For example, nearly three-quarters of all bachelor's degree seekers who began in 1989–90 either attained some degree or were still enrolled in postsecondary education in 1994, compared to 59 percent of those seeking a certificate and 55 percent of those seeking an associate's degree.

Percentage of 1989–90 beginning postsecondary students who attained a degree or who were still enrolled as of spring 1994, by initial degree objective and type of degree attained



SOURCE: NCES, 1990 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:90/94).

Although many first-time 1989–90 beginning students seeking associate's degrees and certificates had not completed the degree they sought after 5 years, many were enrolled for a significant period of time. For instance, among associate's degree seekers at 2-year institutions who had not completed degrees, the average

BEST COPY AVAILABLE

student was enrolled for 19 months. Certificate seekers at less-than-4-year institutions (includes 2-year and less-than-2-year institutions) who did not complete their credential were enrolled for an average of 11 months.[10]

Type of Institution

Community colleges are an important cost-saving vehicle for students seeking bachelor's degrees. Because their tuition and fees are often lower, they can be an inexpensive way for students to meet lower-division requirements. In 1989–90, nearly one-quarter (23 percent) of bachelor's degree seekers began their studies at 2-year institutions.[11] Although attending a community college may make good financial sense, it may not be conducive to completing a bachelor's degree.

- **Bachelor's degree seekers who enroll initially at 2-year institutions are far less likely than those who start at 4-year institutions to attain a bachelor's degree within 5 years.**

Fifty-seven percent of first-time beginning students seeking a bachelor's degree who began at a 4-year institution in 1989–90 had completed the degree 5 years later, compared to 8 percent of those who began at a 2-year institution. Taking into account continued enrollment toward a bachelor's degree and attainment of other degrees, three-quarters of bachelor's degree seekers who began at 4-year institutions had completed some degree or were still enrolled toward a bachelor's degree after 5 years, compared to 54 percent of those who began at 2-year institutions.

Percentage distribution of 1989–90 beginning postsecondary students seeking bachelor's degrees, by highest degree attained as of spring 1994 and level of first institution attended

Level of first institution	Highest degree completed			Total, any degree	Still enrolled for bachelor's	No degree, not enrolled
	Bachelor's	Associate's	Certificate			
Total	**45.8**	**5.1**	**3.3**	**54.3**	**17.5**	**28.3**
4-year	57.1	2.5	2.1	61.7	15.3	23.1
2-year	7.9	13.9	7.2	29.0	25.3	45.8

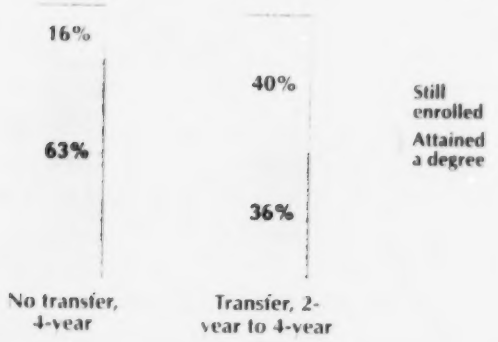
SOURCE: NCES, 1990 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:90/94).

Bachelor's degree seekers who begin their postsecondary education at a 2-year institution must transfer to a 4-year institution in order to complete a bachelor's degree; however, many students fail to do so. For students who do transfer to a 4-year institution, having attended a 2-year institution is not related to their overall rates of persistence, but is associated with time-to-degree. Five years after initial entry, 40 percent of bachelor's degree seekers at 2-year institutions who transferred to 4-year institutions were still enrolled, and 36 percent had completed a postsecondary credential.

Thus, although bachelor's degree seekers who started at 2-year institutions were less likely than those who started at 4-year institutions to attain a bachelor's degree within 5 years (57 versus 8 percent), if students who began at 2-year institutions did transfer, they were equally as likely as those who began at 4-year institutions to persist overall (76 versus 78 percent).

BEST COPY AVAILABLE

Percentage of 1989–90 beginning postsecondary students seeking bachelor's degrees who attained a degree or were still enrolled as of spring 1994, by type of first institution attended and transfer status



SOURCE: NCES, 1990 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:90/94).

- **Bachelor's degree recipients who start at 2-year institutions are more than twice as likely as those who start at 4-year institutions to take more than 6 years to complete their degree.**

Many students who enroll at community colleges attend part time. For instance, in 1989–90, 48 percent of students enrolled at 2-year institutions were enrolled on a less than full-time basis.[12] Therefore, bachelor's degree seekers who first enroll in these institutions may be likely to take longer to complete their degree. Among 1992–93 bachelor's degree recipients, those who started at 2-year institutions were more than twice as likely as those who started at 4-year institutions to take more than 6 years to complete their degree (44 versus 18 percent).[13]

- **Graduates of public 4-year institutions take longer to complete their bachelor's degree than graduates of private, not-for-profit institutions.**

Among bachelor's degree seekers who start at 4-year institutions, time-to-degree is also related to the control of the 4-year institution. Those who received their bachelor's degree from private, not-for-profit 4-year institutions were much more likely than graduates of public 4-year institutions to have completed the degree within 4 years (53 versus 28 percent).[14]

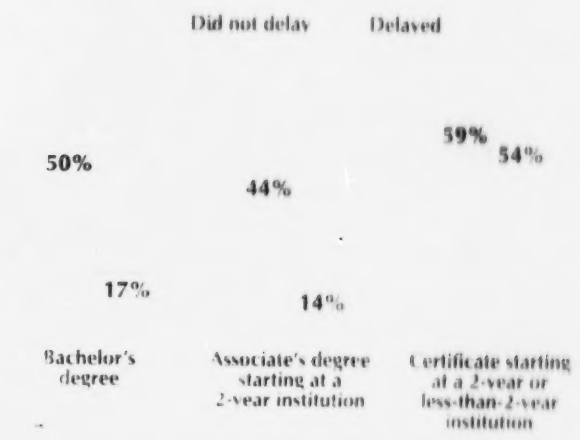
TIMING OF ENROLLMENT

- **Delaying enrollment into postsecondary education by as little as 1 year after high school is associated with poorer persistence and attainment outcomes.**

Many students delay enrolling in postsecondary education; in fact, almost one-third of beginning postsecondary students in 1989–90 did so.[15] Delayed entry is more common among lower SES students than high SES students (57 versus 10 percent), and among students whose parents had not completed any education beyond high school than among students whose parents have had some postsecondary education (from 33 to 50 percent and 9 to 20 percent, respectively).[16] These differences in the timing of enrollment are important because students who delay their enrollment are less likely to attain a degree or persist than those who enter postsecondary education immediately.

Among first-time beginning students in 1989–90, bachelor's degree seekers who delayed their entry into postsecondary education by as little as 1 year after receiving their high school diploma were less likely to attain the degree they sought within 5 years than those who enrolled immediately. They were also twice as

Percentage of 1989–90 beginning postsecondary students who attained their initial degree objective or a higher degree as of spring 1994, by delayed entry status



SOURCE: NCES, 1990 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:90/94).

likely as those who did not delay to attain no degree and to no longer be working toward a bachelor's degree (48 versus 25 percent).[17] Similarly, associate's degree seekers at 2-year institutions who delayed their enrollment were less likely to attain the degree they sought or a higher degree than students who did not delay. Delayed entry was not associated with the likelihood of attaining a certificate or a higher degree among certificate seekers at less-than-4-year institutions, however.

The experience of students who received their bachelor's degrees in 1993 provides further evidence of the effect of delayed enrollment. Among 1993 bachelor's degree recipients, those who delayed entry by 1 or more years were less likely to complete their degree within 4 years (11 versus 38 percent) and were more likely to take 6 or more years to do so (22 versus 59 percent).[18]

BEST COPY AVAILABLE

Enrollment Intensity and Continuity

Enrollment has two dimensions: intensity and continuity. The intensity of enrollment refers to whether a student attends part time or full time, and the continuity of enrollment refers to whether or not a student is continuously enrolled over a period of time. Both part-time and noncontinuous enrollment have been shown to be related to lower rates of student persistence.[19]

- **Full-time enrollment is associated with higher rates of persistence and attainment.**

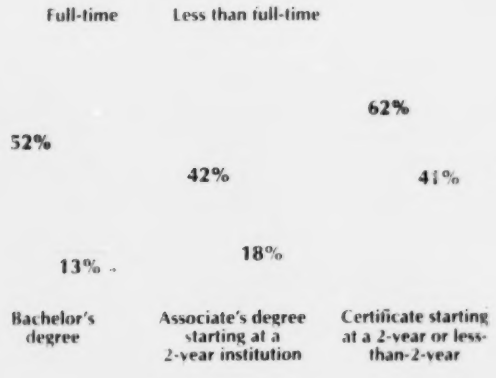
Exclusively part-time enrollment is most common among first-time beginning students attending public less-than-4-year institutions and those seeking subbaccalaureate degrees and certificates.[20] In total, 42 percent of associate's degree seekers at 2-year institutions and 36 percent of certificate seekers at less-than-4-year institutions enrolled on a less than full-time basis during their first term in 1989–90, compared to 15 percent of bachelor's degree seekers.[21] Exclusively part-time attendance is more common among students who are older (45 percent for those aged 20 years or older versus 7 percent for those aged 18), financially independent (46 percent for independent students versus 10 percent for dependent students), and who work full time while enrolled (52 percent for those who worked 34 or more hours per week versus 4 percent for those who worked less than 15 hours per week).[22]

The intensity of students' enrollment is related to their postsecondary persistence and attainment regardless of their degree objective. As expected, bachelor's degree seekers who first enrolled on a full-time basis were more likely to complete a bachelor's degree within 5 years than those who enrolled less than full time (52 compared to 13 percent). Illustrating that part-time attendance may prolong students' time-to-degree, bachelor's degree seekers who attended less than half time were more

likely than their full-time counterparts to be still enrolled 5 years after initially entering postsecondary education. Despite the high number of part-time students who were still enrolled, overall the 1989–90 beginning bachelor's degree seekers who initially attended less than full time were more likely than students who attended exclusively full time to have no degree and to be no longer working toward a bachelor's degree 5 years after initially entering postsecondary education (25 versus 44 percent).

Less than full-time attendance is also negatively associated with the persistence and attainment outcomes of students seeking subbaccalaureate degrees. For example, 62 percent of certificate seekers at less-than-4-year institutions and 42 percent of associate's degree seekers at 2-year institutions who attended full time had attained the degree they sought or a higher degree after 5 years, compared to 41 and 18 percent, respectively, of those who attended less than half time.[23]

Percentage of 1989–90 beginning postsecondary students who attained their initial degree objective or a higher degree as of spring 1994, by enrollment status during first term



SOURCE: NCES, 1990 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:90/94).

- **Breaking the continuity of enrollment is related to lower overall persistence and prolonged time-to-degree.**

As with part-time attendance, noncontinuous enrollment may be associated with factors such as students' lack of funds or their need to work full time, which might interfere with their persistence. On average, 35 percent of 1989–90 first-time beginners who interrupted their enrollment for a period of more than 4 months had completed a degree 5 years after their initial enrollment, compared to 56 percent of those who had no break in continuity.[24] Students who interrupted their enrollment were more likely to be still enrolled 5 years after initially entering postsecondary education (25 versus 8 percent).

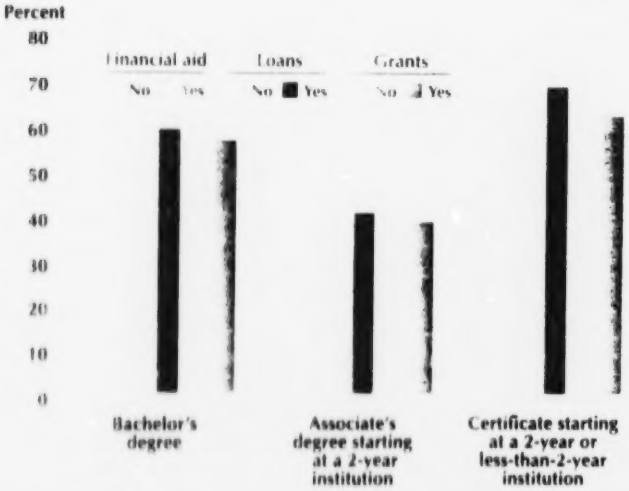
Financial Aid

Financial aid provides access to postsecondary education for students without the financial resources to attend on their own. Because aid may substitute for work as a financial resource, it may facilitate persistence and attainment by enabling a student to attend full time rather than working to finance their education and enrolling part time.

- **Aided bachelor's degree seekers graduate at the same rate as bachelor's degree seekers who do not receive aid.**

Beginning bachelor's degree seekers who received financial aid in 1989–90 (both grants and loans) were more likely to attain a bachelor's degree within 5 years than those who did not receive such aid. Those who did not receive aid were more likely to be still working toward their degree. Students who did not receive aid were also more likely to have no degree and to be no longer enrolled in postsecondary education.

Percentage of 1989–90 beginning postsecondary students who attained their initial degree objective or a higher degree as of spring 1994, by receipt of financial aid, loans, and grants



SOURCE: NCES, 1990 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:90/94).

The differences in the attainment rates among 1989–90 beginning postsecondary students seeking bachelor's degrees according to financial aid receipt are largely an artifact of the control of the institutions students attend. Specifically, overall rates of persistence and attainment are higher among bachelor's degree seekers in private, not-for-profit institutions, where financial aid receipt is more common than in public institutions.[25] When the control of the institution is held constant, persistence and attainment rates among bachelor's degree seekers who received any aid, and grants and loans in particular, are similar. Thus it appears that financial aid helps aided students graduate at the same rate as nonaided students.

BEST COPY AVAILABLE

Percentage of 1989–90 beginning postsecondary students seeking bachelor's degrees who attained any degree or were still enrolled as of spring 1994, by control of first institution and aid receipt in 1989–90

	Control of first institution	
Aid received	Public	Private, not-for-profit
Total	**71.2**	**81.0**
Received aid in 1989–90		
No	71.0	80.8
Yes	71.5	81.1
Received grant in 1989–90		
No	71.6	80.6
Yes	70.3	81.3
Received loan in 1989–90		
No	70.9	81.8
Yes	72.6	79.9

SOURCE: NCES, 1990 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:90/94).

- **Financial aid is positively related to attainment among students seeking subbaccalaureate degrees.**

For students seeking subbaccalaureate degrees and certificates, the effects of financial aid receipt differ according to degree objective. For example, certificate seekers at less-than-4-year institutions who received financial aid in general, and specifically grants or loans, were more likely to obtain a certificate or a higher degree by 1994 than those who did not receive such aid.

Compared to students attending other levels of institutions, relatively few 1989–90 beginning postsecondary students seeking associate's degrees at 2-year institutions received financial aid. In total, 35 percent received some sort of aid; 11 percent received loans and 31 percent received grants.[26] Among associate's degree

seekers at 2-year institutions, both overall receipt of financial aid and receipt of grants were associated with completing associate's and higher degrees.

Working While Enrolled

Many students work in order to help finance their postsecondary enrollment, which students may do instead of or in addition to receiving financial aid. Although working full time while enrolled may help free students from future debt, evidence suggests that this choice is negatively related to persistence and attainment outcomes.

- **Student employment is on the rise.**

The percentage of full-time students at 2- and 4-year colleges and universities who work while enrolled rose from 34 percent in 1970 to 47 percent in the late 1980s and has stabilized at this rate since then (47 percent in 1995). During this same period, the percentage of students working 20 or more hours per week almost doubled (from 14 to 27 percent).[27] Data on 1989–90 first-time beginning students indicate that the majority of students worked at some time while enrolled in postsecondary education (89 percent).[28]

- **Students who work full time have lower rates of postsecondary persistence and attainment.**

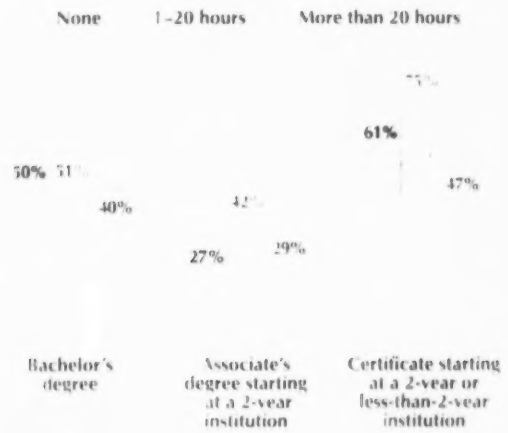
The relationship of student employment to persistence and attainment varies with the intensity of the employment. Research suggests that full-time, off-campus work may negatively affect students' persistence and attainment.[29] Students who work full time are more likely to attend exclusively part time.[30] As indicated above, part-time students have lower rates of persistence and attainment.

Percentage of 16- to 24-year-old full-time college students who were employed in October, by hours employed per week: 1970–95

SOURCE: U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

Students who work appear to be disadvantaged in programs where full-time attendance is highly correlated with completing postsecondary education. For instance, bachelor's degree seekers and certificate seekers at less-than-4-year institutions who worked 20 or more hours per week during their first year of enrollment were much less likely than students who did not work or who worked 1–20 hours per week to earn the degree they sought within 5 years (or a higher degree in the case of certificate seekers). However, the attainment rates of associate's degree seekers at 2-year institutions did not vary according to the number of hours they worked while enrolled.

Percentage of 1980–90 beginning postsecondary students who attained their initial degree objective or a higher degree as of spring 1994, by hours worked per week while enrolled



SOURCE: NCES, 1990 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:90/94).

SUMMARY

The data presented here illustrate that along with students' background characteristics, their enrollment choices are related to their likelihood of completing postsecondary education. Students choose when to enroll, the type of institution in which to enroll, the intensity of their enrollment, and how to finance their enrollment. In doing so, they must balance their degree aspirations with the economic and social realities of their lives.

Generally, the evidence suggests that students who attend part time and work full time are less likely to complete their degree in a timely fashion than students who attend full time and work

BEST COPY AVAILABLE

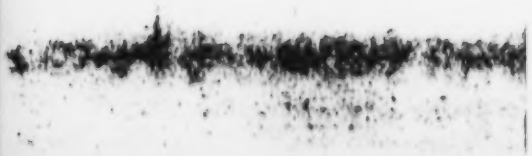
part time. Part-time attendance can also signify the existence of other factors besides work that might interfere with persistence, such as limited financial resources or family responsibilities.

For students seeking bachelor's degrees, the surest path to attainment appears to be entering a 4-year institution immediately following high school. Although delaying entry in order to work and save money or starting out at a lower cost community college may make good financial sense, evidence suggests these choices are less likely to lead to attaining a bachelor's degree within 5 years.

Bachelor's degree seekers who received financial aid and those who did not receive aid persisted and attained at similar rates. For students seeking subbaccalaureate credentials, in the aggregate, financial aid significantly improved their chances of success. Among certificate seekers at 2-year and less-than-2-year institutions and associate's degree seekers at 2-year institutions, students who received any financial aid, and grants in particular, were more likely to have completed the degree they sought or a higher degree within 5 years. Although receipt of loans had a similar effect for certificate seekers, attainment rates of associate's degree seekers at 2-year institutions did not differ according to loan receipt.

Even though certain enrollment choices may be associated with higher rates of success, no particular enrollment pattern is feasible or appropriate for every student. Rather, the postsecondary sector offers a range of enrollment choices in order to meet the needs of students with different degree objectives and social and economic circumstances. With the earnings gap between a high school degree and a postsecondary credential widening and the economy demanding increasingly skilled workers, greater numbers of students who are unable to attend full time or who cannot afford to enroll in 4-year institutions may be entering the postsecondary sector. Many of these students have full-time jobs, child care needs, and other family obligations. Understanding the factors associated with postsecondary success can help these

students in making appropriate enrollment choices. Moreover, this information can assist postsecondary institutions in designing programs for students who are at risk of attrition.



REFERENCES

[1]American Council on Education: Division of Policy Analysis and Research, *Higher Education Today: Facts in Brief*, Washington, D.C.: May 1994, 5; and W.N. Grubb, *Postsecondary Vocational Education and the Sub-B.A. Labor Market: New Evidence on Economic Returns*, Berkeley: February 1991.

[2]U.S. Department of Education, National Center for Education Statistics, *The Condition of Education 1997* (NCES 97-388), Washington, D.C.: 1997, 120, based on U.S. Department of Commerce, Bureau of the Census, March Current Population Surveys.

[3]Ibid., 62, based on U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

[4]Ibid., 94, based on U.S. Department of Commerce, Bureau of the Census, March Current Population Surveys.

[5]U.S. Department of Commerce, Bureau of the Census, *Current Population Reports P20-479*, Washington, D.C.: 1994; U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics 1993* (NCES 93-292), Washington, D.C.: 1993; and *The Condition of Education 1997*, 162.

[6]*The Condition of Education 1997*, 64, based on NCES, National Longitudinal Study of the High School Class of 1972 (NLS-72), First Follow-up (1974); High School and Beyond (HS&B) study, Senior Cohort, Third Follow-up Survey (1986); and National Education Longitudinal Study of 1988 (NELS:88), Second (1992) and Third Follow-up (1994).

[7]U.S. Department of Education, National Center for Education Statistics, *Descriptive Summary of 1989–90 Beginning Postsecondary Students: 5 Years Later, With an Essay on Postsecondary Persistence and Attainment*, by L. Berkner, S. Cuccaro-Alamin, and A.C. McCormick (NCES 96-155), Washington, D.C.: 1996, table 1, p. 3.

[8]Although family income and socioeconomic status (SES) are highly correlated, they are constructed differently. Family income is usually shown in percentiles that are calculated separately for dependent and independent students. The percentile rank is based on family income for dependent students, and the student's own income for independent students. SES is a composite variable that combines parents' occupation, dependent student's family income, and the family's possession of a series of material goods.

[9]NCES, *Descriptive Summary of 1989–90 Beginning Postsecondary Students: 5 Years Later*, table 7, p. 8.

[10]*The Condition of Education 1997*, 68, based on NCES, 1990 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:90/94).

[11]NCES, *Descriptive Summary of 1989–90 Beginning Postsecondary Students: 5 Years Later*, table 14.10, p. 128.

[12]U.S. Department of Education, NCES, BPS:90/94 Beginning Postsecondary Students Second Follow-up: Data Analysis System, Washington, D.C.: 1997.

[13]U.S. Department of Education, National Center for Education Statistics, *The Condition of Education 1996* (NCES 96-304), Washington, D.C.: 1996, 60, based on NCES, 1993 Baccalaureate and Beyond Longitudinal Study, First Follow-up (B&B:93/94).

[14]Ibid.

[15]NCES, *Descriptive Summary of 1989–90 Beginning Postsecondary Students: 5 Years Later*, table 14.8, p. 126.

[16]U.S. Department of Education, NCES, BPS:90/94 Beginning Postsecondary Students Second Follow-up: Data Analysis System, 1997.

[17]*The Condition of Education 1996*, 212–213, based on NCES, 1990 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:90/94).

[18]Ibid., 60, based on NCES, 1993 Baccalaureate and Beyond Longitudinal Study, First Follow-up (B&B:93/94).

[19]U.S. Department of Education, National Center for Education Statistics, *College Persistence and Degree Attainment for 1980 High School Graduates: Hazards for Transfers, Stopouts, and Part-Timers*, by C.D. Carroll (CS 89-302), Washington, D.C.: 1989; and NCES, *Descriptive Summary of 1989–90 Beginning Postsecondary Students: 5 Years Later*.

[20]U.S. Department of Education, National Center for Education Statistics, *Profile of Part-Time Undergraduates in Postsecondary Education: 1989–90*, by A.C. McCormick, S. Geis, and R. Vergun (NCES 95-173), Washington, D.C.: 1995, table 2, pp. 8–10.

[21]U.S. Department of Education, NCES, BPS:90/94 Beginning Postsecondary Students Second Follow-up: Data Analysis System, Washington, D.C.: 1997.

[22]*The Condition of Education 1997*, 233–235, based on NCES, 1990 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:90/94).

[23]Ibid., 68, based on NCES, 1990 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:90/94).

[24]NCES, *Descriptive Summary of 1989–90 Beginning Postsecondary Students: 5 Years Later*, table 1.2, p. 33.

[25]U.S. Department of Education, National Center for Education Statistics, *Student Financing of Undergraduate Education, 1992–93*, by J. Tuma and S. Geis (NCES 95-202), Washington, D.C.: 1995.

[26]*The Condition of Education 1997*, 230–231, based on NCES, 1990 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:90/94).

[27]Ibid., 162, based on U.S. Department of Commerce, Bureau of the Census, October Current Population Surveys.

[28]Ibid., 72, based on NCES, 1990 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:90/94).

[29]A. Astin, *Financial Aid and Student Persistence* (HERI Research Report No. 75-2), Los Angeles: Higher Education Research Institute, 1975; A. Astin, *Preventing Students from Dropping Out*, San Francisco: Jossey-Bass, 1975; R. Ehrenberg and D. Sherman,

"Employment While in College: Academic Achievement and Post-College Outcomes: A Summary of Results," *Journal of Human Resources* 12 (1) (1986): 1–23; and U.S. Department of Education, National Center for Education Statistics, *Undergraduates Who Work While Enrolled in Postsecondary Education: 1989–90*, by L. Horn (NCES 94-311), Washington, D.C.: 1994.

[30]*The Condition of Education 1997*, 72, based on NCES, 1990 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:90/94).

Other NCES Publications

For more information, see the following NCES publications:

The Condition of Education 1997. Washington, D.C.: 1997 (NCES 97-388)
The Condition of Education 1996. Washington, D.C.: 1996 (NCES 96-304)
The Condition of Education 1995. Washington, D.C.: 1995 (NCES 95-273)
Digest of Education Statistics 1996. Washington, D.C.: 1996 (NCES 96-133)
Digest of Education Statistics 1995. Washington, D.C.: 1995 (NCES 95-029)

Other *Findings from The Condition of Education:*

No. 1: *High School Students Ten Years After* A Nation At Risk (NCES 95-764)
No. 2: *The Educational Progress of Black Students* (NCES 95-765)
No. 3: *America's Teachers Ten Years After* A Nation At Risk (NCES 95-766)
No. 4: *The Educational Progress of Hispanic Students* (NCES 95-767)
No. 5: *The Educational Progress of Women* (NCES 96-768)
No. 6: *The Cost of Higher Education* (NCES 96-769)
No. 7: *Teachers' Working Conditions* (NCES 97-371)
No. 8: *Preparation for Work* (NCES 97-373)
No. 9: *Minorities in Higher Education* (NCES 97-372)
No. 10: *The Social Context of Education* (NCES 97-981)
No. 11: *Women in Mathematics and Science* (NCES 97-982)
No. 12: *Public and Private Schools: How Do they Differ?* (NCES 97-983)

Until supplies are exhausted, a single copy of *The Condition of Education 1997* (NCES 97-388), as well as other NCES publications, may be obtained at no cost from either the National Library of Education (NLE), phone (800) 424-1616 or e-mail: LIBRARY-NLE@ed.gov, or the National Education Data Resource Center (NEDRC), phone (703) 845-3151 or e-mail: ndrc@inet.ed.gov. If you need more than one copy of a publication or supplies have been exhausted, copies may be purchased from the Government Printing Office (GPO). To order a copy from the GPO, see the order form at the end of this document.

This report, as well as many other NCES products, are available through the Internet at http://www.ed.gov/NCES/

32 BEST COPY AVAILABLE

Electronic Access to NCES and Other ED Information

NCES constituents with access to the Internet can tap a rich collection of education-related information at the U.S. Department of Education's (ED) public Gopher/FTP/World Wide Web site, including:

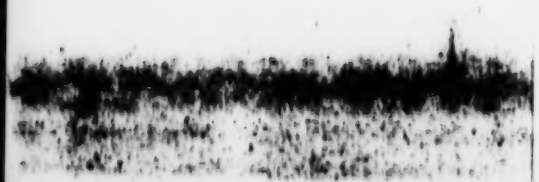
- announcements of new publications and data sets
- descriptions of NCES and ED programs
- statistical tables, charts, and data sets
- press releases
- general information about the Department
- searchable ED staff directory
- funding opportunities
- event calendars
- directories of effective programs
- directory of education-related information centers
- research findings and synthesis
- full-text publications for teachers, parents, and researchers
- pointers to public Internet resources at R&D Centers, Regional Laboratories, ERIC Clearinghouses, and other ED-funded institutions.

They can access the information by using:

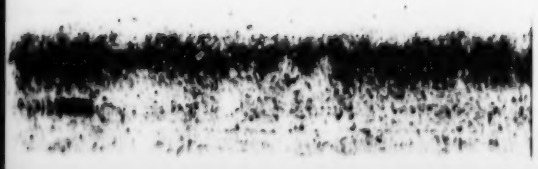
A **Gopher client,** gopher.ed.gov; or select **North America-->U.S. Department of Education.** From the main gopher menu, NCES produced information is available under Educational Research, Improvement and Statistics (OERI & NCES)/National Center for Education Statistics (NCES)/.

An FTP client, ftp to ftp.ed.gov; log on as "anonymous."

A World Wide Web client such as NCSA Mosaic or Lynx; point to URL=http://www.ed.gov/ or http://www.ed.gov/NCES



Dial-in users can access much of the same information through the **OERI Toll-Free Electronic Bulletin Board,** which provides on-line access to statistical data, research findings, information about Department of Education programs, and, in some cases, full texts of departmental documents. Computer users can retrieve this information at any hour using a modem (at speeds up to 14,400 baud) and calling **(800) 222-4922**. Local direct, call **(202) 219-1511**.



Selected Publications

Listed below is a sampling of frequently requested NCES publications available for purchase.

Adult Literacy in America
GPO #065–000–00588–3, $12

America's Teachers: Profile of a Profession
GPO #065–000–01046–1, $25

The Condition of Education 1997
GPO #065–000–00997–8, $25

The Condition of Education 1996
GPO #065–000–00871–8, $25

Digest of Education Statistics, 1996
GPO #065–000–00904–8, $44

Dropout Rates in the United States, 1995
GPO #065–000–01034–8, $13

Education and the Economy: An Indicators Report
GPO #065–000–00990–1, $14

Historically Black Colleges and Universities, 1976–94
GPO #065–000–00903–0, $9

Private Schools in the U.S.: A Statistical Profile
GPO #065–000–01045–3, $20

Programs at Higher Education Institutions for Disadvantaged Precollege Students
GPO #065–000–00833–5, $6.50

Projections of Education Statistics to 2007
GPO #065–000–01030–5, $19

Pursuing Excellence: A Study of United States Eighth-Grade Mathematics and Science Teaching, Learning, Curriculum, and Achievement in International Context
GPO #065–000–00959–5, $9.50

Pursuing Excellence: A Study of United States Fourth-Grade Mathematics and Science Achievement in International Context
GPO #065–000–01018–6, $TBA

Schools and Staffing in the United States: A Statistical Profile, 1993–94 Survey (SASS)—SASS by State
GPO #065–000–00889–1, $15

Teacher Professionalism and Teacher Commitment: A Multilevel Analysis
GPO #065–000–00975–7, $4.50

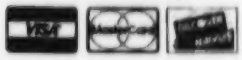
Time Spent Teaching Core Academic Subjects in Elementary Schools
GPO #065–000–00980–3, $9.50

Understanding Racial-Ethnic Differences in Secondary School Science and Mathematics Achievement
GPO #065–000–00747–9, $6

Urban Schools: The Challenge of Location and Poverty
GPO #065–000–00869–6, $14

United States Government
INFORMATION
PUBLICATIONS ★ PERIODICALS ★ ELECTRONIC PRODUCTS

Charge your order.
It's easy!



Fax orders to: (202) 512-2250
Phone orders to: (202) 512-1800
Mail to: Superintendent of Documents
PO Box 371954
Pittsburgh, PA 15250-7954

Order Processing Code
*7997

Qty.	Stock Number	Title	Price	Total Price

Total for Publications

NOTE: Prices include regular domestic postage and handling and are subject to change. International customers please add 25%.

Personal name

Company name

Street address

City, State, Zip code

Daytime phone including area code

For privacy protection, check the box below:
❑ Do not make my name available to other mailers
Check method of payment:
❑ Check payable to Superintendent of Documents
❑ GPO Deposit Account ☐☐☐☐☐☐☐-☐
❑ VISA ❑ MasterCard ❑ Discover/NOVUS
☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
☐☐☐☐ (expiration date)

Thank you for your order!

1/97

For sale by the U.S. Government Printing Office
Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328
ISBN 0-16-049222-X

ISBN 0-16-049222-X

United States
Department of Education
Washington, DC 20208–5650

Official Business
Penalty for Private Use, $300

Postage and Fees Paid
U.S. Department of Education
Permit No. G–17

Standard Mail (A)